CLAIM AMENDMENTS:

1. (currently amended) A rack for use in a compound handling system for handling a multiplicity of tubes containing aliquots of chemical or biological samples, which comprises:

a ~~single piece~~ peripheral frame, said frame having a top side and a bottom side;

grid-like separation walls that define a plurality of rows of storage compartments within said frame ~~that are~~ , each compartment being configured and dimensioned to receive a sample tube containing a chemical or biological sample in aliquotted form, said storage compartments being adjacent to each other and defined by separation walls between them, each of said storage compartments having an inner wall and being open at the top side of the frame and open at the bottom side of the frame so that a sample tube is insertable into the storage compartment from either the top side of the frame or the bottom side of the frame and is removable from the storage compartment from either the top side of the frame or the bottom side of the frame ~~with one and the same orientation of the sample tube with respect to the frame~~, and

means for retaining a sample tube within each of said storage compartments, said retaining means ~~being an integral part of said frame, said retaining means being a part~~ comprising a projection of the inner surface of the wall of each storage compartment, ~~that part of said inner wall being configured and dimensioned to cooperate with a part~~ said projection being suitable for snapping between two ridges of the outer wall of a sample tube ~~for retaining the sample tube at a predetermined position~~ that is positioned within said compartment.

2. (currently amended) A rack according to claim 1, wherein each of said compartments is ~~configured and dimensioned~~ suitable for receiving and holding an entire sample tube.

3. (original) A rack according to claim 1, wherein each of said storage compartment is rectangular.

4. (canceled)

5. (canceled)